

SWB  
C1  
cont

- a metal surface having a zinc-containing coating;

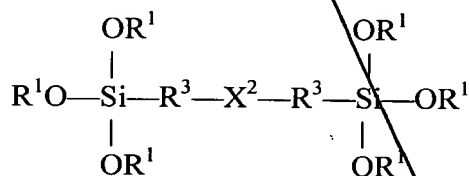
- zinc; and

- zinc alloy;

and

B2  
cont

(b) applying a silane solution to said metal surface, said silane solution having at least one vinyl silane and at least one bis-silyl aminosilane, wherein said at least one vinyl silane and said at least one bis-silyl aminosilane have been at least partially hydrolyzed, and wherein the bis-silyl aminosilane comprises:



wherein:

-each  $\text{R}^1$  is individually chosen from the group consisting of: hydrogen and  $\text{C}_1\text{-C}_{24}$  alkyl;

- each  $\text{R}^3$  is individually chosen from the group consisting of: substituted aliphatic groups, unsubstituted aliphatic groups, substituted aromatic groups, and unsubstituted aromatic groups; and

- $\text{X}^2$  is either:



-wherein each  $\text{R}^4$  is hydrogen; and

- $\text{R}^5$  is chosen from the groups consisting of: substituted and unsubstituted aliphatic groups, and substituted and unsubstituted aromatic groups.

SUB  
CO

-- 9. (Amended) The method of claim 1, wherein each R<sup>1</sup> is individually chosen from the group consisting of: hydrogen, ethyl, methyl, propyl, iso-propyl, butyl, iso-butyl, sec-butyl and ter-butyl.--

B3

Sub D1  
cont.

-- 10. (Amended) The method of claim 1, wherein R<sup>3</sup> is individually chosen from the group consisting of: C<sub>1</sub> - C<sub>10</sub> alkylene, C<sub>1</sub> - C<sub>10</sub> alkenylene, arylene, and alkylarylene.--

-- 12. (Amended) The method of claim 1, wherein R<sup>5</sup> is chosen from the group consisting of: C<sub>1</sub>-C<sub>10</sub> alkylene, C<sub>1</sub>-C<sub>10</sub> alkenylene, arylene, and alkylarylene.--

B4  
Sub D1  
cont.

-- 13. (Amended) The method of claim 1, wherein said bis-silyl aminosilane is chosen from the group consisting of: *bis*-(trimethoxysilylpropyl)amine, *bis*-(triethoxysilylpropyl)amine, and *bis*-(trimethoxysilylpropyl)ethylene diamine.--